

```
println (("1D Barcodes" =~ /1D/).replaceFirst("2D"))
```



A short talk about (why you should use) 2D Barcodes

# Barcodes?

- Technology to translate binary data into (printed) pixels and back
- 1D Barcodes - The old-timers
- 2D Barcodes - Great stuff
- 3D Barcodes - Believe it or not

# ID Barcodes - Pixels in Bars

UPC

EAN 13

Code 128A

RM4SCC

EAN 8

Code 128C



Code 128B

EAN 5

Code 11

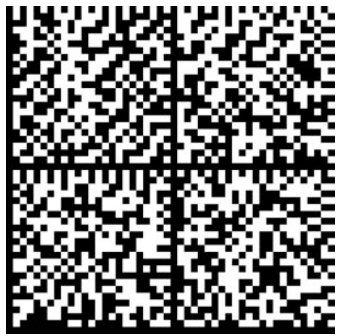
Pharmacode

and many more...

# ID Barcodes

- Bar-width and gap-width are essential
- Mostly contain numbers, assigned by organizations
- No real use-data - Needs data-lookup from server
- Different data usually means different code
- Different code => different algorithm
- Different algorithm => different reader

# 2D Barcodes - “Just” Pixels



Data Matrix



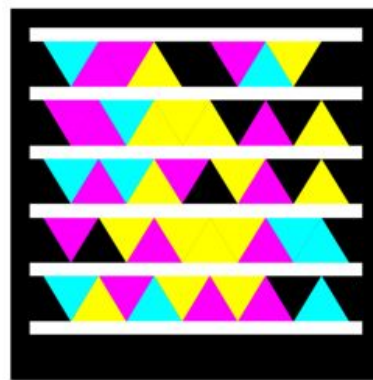
ShotCode



Aztec



Semacode



HCCB (3D)



QR Code

and many more...

# 2D Barcodes

- No bars - Just pixels
- Most formats can contain variable amount and different types of data (text, numbers, binary)
- Variable amount of data => One Format for different use cases (Awesome!)
- Easy to scan with (almost) any camera phone

# Product information

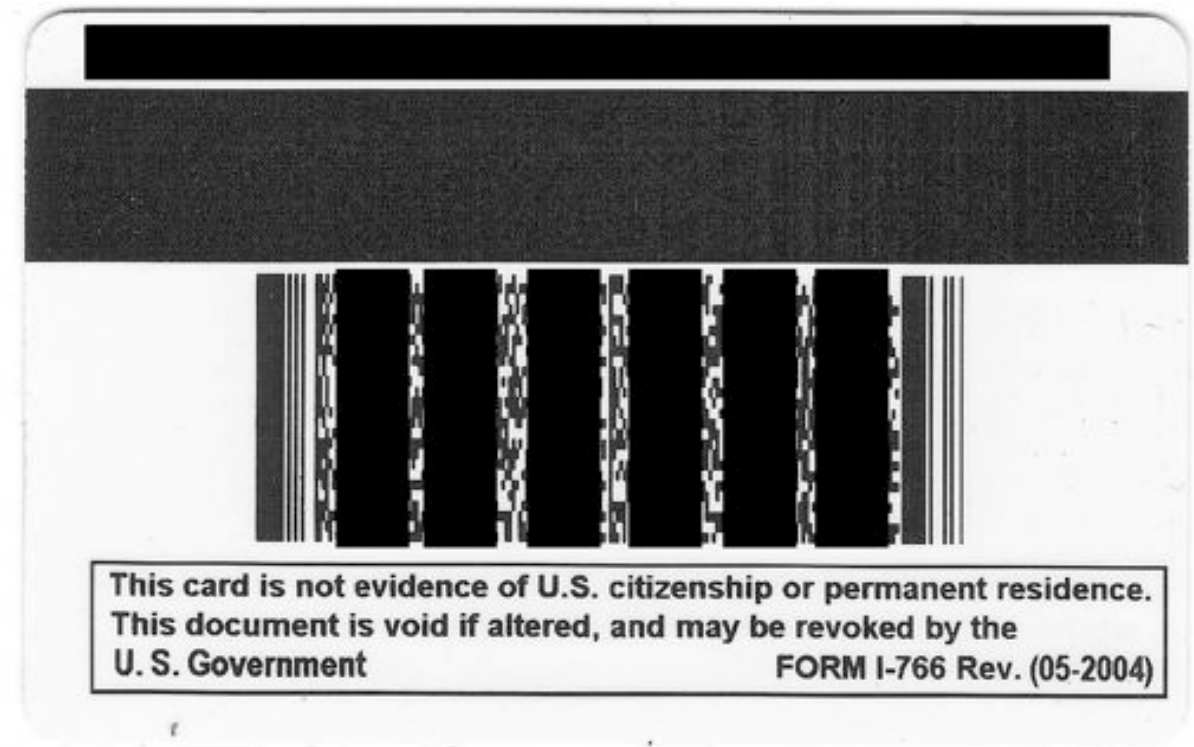


# Find Friends (or followers)





# Identification



# Print Signs



**FOR SALE**

## Selling My Mansion

I have to sell my mansion because, you guessed it, I lost all my money in Vegas.

I need to sell it quickly and am willing to accept any reasonable offer. I take Cashiers or Euros. The property is well taken care of and the neighbors are perfect.

As the market is moving fast, you can track your message via e-mail at [gold@blackmarketcash.com](mailto:gold@blackmarketcash.com) or call me at +1 816 123 1234.



Inaof

### How to use this Code?

If you already have a QR Code reader on your mobile, take a shot of this Code and the decoded URL will lead you to the content and more information. If you don't have a reader on your mobile, take a picture of the code and send it to [SnapQR@SnapQR.com](mailto:SnapQR@SnapQR.com). You will get an answer with more information. You can also simply browse to [MyMansioncode.com](http://MyMansioncode.com) and enter the 5 digit ID of the Code.

# Ticketing





# Advertising



# Currency



<http://www.opensourcecurrency.org>

# Main differences

- 1D Barcodes usually only contain 'numbers'
- 2D Barcodes can usually contain any data
- 1D Barcodes can only be read efficiently by dedicated scanners
- 2D Barcodes can be read with 1.3mp crappy camera

Of course there are more...

# What's next?

- Go, create your own 2D barcodes
- There are many reader-apps for the 'open formats' like QR Code - Get one!
- Use APIs to create your own apps and content
- Check out some of the open source projects
- Be creative! Codes can contain anything!
- Yes, SQL injection works if the decoding backend screws it up

# Interesting Links

- OS reader: <http://code.google.com/p/zxing/>
- OS lib: <http://qrcode.sourceforge.jp/>
- Create codes: <http://www.Snapppr.net>  
(full disclosure: that's my site)
- Get Readers: <http://load.snapppr.net> on your mobile
- Learn more: Google, Wikipedia, Yahoo Answers, ...